Study of the Effect of Different Concentrations of Solanum torvum on Staphylococcus aureus

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Acne is a chronic, inflammatory, skin condition that causes spots and pimples, which manifest mostly on the face. It affects nearly 80% of adolescents and young adults (NCBI). One of the many bacteria associated with this condition is Staphylococcus aureus. With no solutions available without secondary effects, acne tends to lower self-esteem, and sometimes it leads to depression (WebMD). One natural remedy for acne used by the Zapotec civilization (Mexico) was Solanum torvum, also known as turkey-berry. It was used to treat pimples, rash, and itch (Zapotec Natural History). Several claim that Solanum torvum has antibacterial properties against Staphylococcus aureus (Sivapriya, M). The objective of this research was to establish the antibacterial properties of Solanum torvum using two methods: Kirby-Bauer (disk diffusion test) and Real time Cell Growth Logger (RTS-1C). Results on both methods demonstrated that Solanum torvum does not have the ability to kill Staphylococcus aureus. The Kirby-Bauer test proved Solanum torvum as an ineffective antibacterial solution; bacteria were resistant to it: zone of inhibition was 0 mm for all concentrations. Real time Cell Growth Logger results do not show any reduction activity in the optical density of the different concentrations. This research demonstrates that Solanum torvum has no antibacterial properties against Staphylococcus aureus. This leads to the assumption that Solanum torvum may reduce acne because it could be acting as a steroid. Another phase will be done to determine the extent of the anti-inflammatory properties of Solanum torvum by utilizing prostaglandins as markers for present inflammation activity.

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